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Notice of Allowability	Application No.	Applicant(s)	
	10/017,719	FERGUSON ET AL.	
	Examiner	Art Unit	
	Anh-Vu H. Ly	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed June 30, 2006.
2. ☒ The allowed claim(s) is/are 1-7, 10-19, 21-26, 29, and 30 renumbered as 1-25 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
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DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Garth D. Richmond on September 6, 2006.

The application has been amended as follows:

In The Claims

24. (Currently Amended) A method of forwarding data packets using an application-specific integrated circuit (ASIC)-based processor, comprising:

receiving a packet including a header;

filtering the received packet based on the header to accept or reject the received packet;

performing traffic analysis on the accepted packet, including randomized sampling based on a user-configurable sampling rate of one divided by a user-specified integer;

generating a random number;

comparing the user-configurable sampling rate to the generated random number to form a resulting value;

performing the sampling when the resulting value is less than the user-configurable sampling rate;

performing a route lookup for the accepted packet; and

forwarding the accepted packet based on the route lookup.

28. (Canceled).

29. (Currently Amended) An application-specific integrated circuit (ASIC)-based filter for use in router, comprising:

means for downloading a user-configured filter rule;

means for applying the filter rule to a packet received by the router;

means for accepting the packet when the packet is not explicitly rejected by the filter rule

by setting a bit in a packet notification when the packet matches the filter rule;

means for generating a random number;

means for marking the accepted packet for sampling when the random number is less than a predetermined threshold; and

means for determining whether the packet is to be further processed by the router based on a result of the applying the filter rule, the ASIC-based filter being configured to perform independently of other processes being performed by the router.

30. (Currently Amended) The ASIC-based filter of claim 29 ~~[[30]]~~, further comprising:

means for discarding the packet that arrives on an inbound circuit when the packet contains a spoofed network operation center (NOC) source address.

Allowable Subject Matter

2. Claims 1-7, 10-19, 21-26, 29, and 30 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art does not teach or fairly suggest generating a random number and sampling the marked packet, with a bit in a packet notification set when the packet matches the filter rule, when the random number is less than a predetermined threshold, as specified in independent claims 1 and 29.

The prior art does not teach or fairly suggest a load balancer to accept the received packet when the received packet is determined to be out-of-profile and mark the accepted packet as out-of-profile, a second drop precedence being assigned to the out-of-profile accepted packet, as specified in independent claim 19.

The prior art does not teach or fairly suggest randomized sampling based on a user-configurable sampling rate of one divided by a user-specified integer; generating a random number; comparing the user-configurable sampling rate to the generated random number to form a resulting value; and performing the sampling when the resulting value is less than the user-configurable sampling rate, as specified in independent claim 24.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ferguson et al (US Pub 2005/0018682 A1) discloses systems and methods for processing packets.

McRae (US Patent No. 6,970,462 B1) discloses method for high-speed packet classification.

Nikander et al (US Patent No. 6,253,321 B1) discloses method and arrangement for implementing IPSEC policy management using filter code.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H. Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

avl


CHI PHAM
SUPERVISORY PATENT EXAMINER 9/12/07